6.6.5.1 Separate NPAC systems for each state would clearly be uneconomic and inefficient, while a single, nationwide NPAC system would be technically and administratively unwieldy.

6.6.5.2 Regional databases make sense. Although state-of-the-art system architectures are available for industry use, a single database is not desirable because the amount of routing information would, in time, become overwhelming as number portability is deployed nationwide. In addition, having several diverse and independent regional databases reduces the scope of impact if a given regional vendor were unable to fullfill its contractual obligation. Also, by establishing regions that match RBOC territories, the RBOC will (at least initially) have to connect to only a single regional database. This will simplify and speed up an otherwise complicated implementation and may lead to lower costs.

6.6.5.3 State commissions, the industry and the FCC have become accustomed to working with the RBOCs within their regions. State commissions within RBOC service territories have formed associations to address regional issues. The industry is working in state commission-sponsored workshops. Therefore, the RBOC region provides a base within which both incumbents and new entrants are currently working. In addition, state commissions have been asked by LLCs to focus their NPAC efforts on established RBOC territories. The industry, when faced with the opportunity for system efficiencies and a need to meet an aggressive schedule, has leaned toward the established RBOC territories.

6.6.5.4 The designation of the RBOC serving territories and the appropriate NPAC coverage areas has been agreed to by all industry segments in these and state/regional LNP forums.

6.7 LNP Standards

- Various technical standards, including interoperability operational standards, network interface standards, and technical specifications.

6.7.1 Process

The LNPA Selection Working Group delegated responsibility to define standards to the LNPA Technical & Operational Requirements Task Force.

6.7.2 Report Reference

Sections 7 through 11 of the Task Force report contained in Appendix E describe in detail the recommendations made by that team.

6.7.3   Summary of Findings

6.7.3.1   The LNPA Technical & Operational Requirements Task Force developed industry standard NPAC SMS Provisioning Process Flows. See Section 7 and Appendix B of the LNPA Technical & Operational Requirements Task Force Report contained in Appendix E of this report for more details.

6.7.3.2   The LNPA Technical & Operational Requirements Task Force developed an industry standard NANC Functional Requirements Specification (FRS) document that defines the functional requirements of the NPAC SMS. See Section 8 and Appendix C of the LNPA Technical & Operational Requirements Task Force Report contained in Appendix E of this report for more details.

6.7.3.3   The LNPA Technical & Operational Requirements Task Force developed an industry standard NANC Interoperable Interface Specification (IIS) document that contains the information model for the NPAC SMS mechanized interfaces. See Section 9 and Appendix D of the LNPA Technical & Operational Requirements Task Force Report contained in Appendix E of this report for more details.

6.7.3.4   The LNPA Technical & Operational Requirements Task Force developed an industry wide process to enforce compliance with the policy developed by the LNPA Architecture Task Force for porting of reserved and unassigned numbers. The process includes notification to non-compliant Service Providers followed by the Service Providers right to invoke the NANC Resolution of Numbering Disputes procedures or other escalation as the service provider deems appropriate should a dispute arise. See Section 10 of the LNPA Technical & Operational Requirements Task Force Report contained in Appendix E of this report for more details.

6.7.3.5   The LNPA Technical & Operational Requirements Task Force developed an interim industry wide procedure to control the change management process for designing, developing, testing, and implementing changes to the NANC FRS, NANC IIS, and related processes. This interim process was developed to ensure consistency in the submission and consideration of changes to requirements until a permanent process is adopted as recommended in 7.1.1.D.

6.7.4   Recommendation

6.7.4.1 The LNPA Selection Working Group recommends adoption by NANC of the documents described in Sections 6.7.3.1 through 6.7.3.3 above, and the processes described in Sections 6.7.3.4 and 6.7.3.5 above.

6.7.5 Justification

6.7.5.1 The LNPA Technical & Operational Requirements Task Force reviewed the activities in each of the seven (7) regions to evaluate the LNP planning activities currently underway. It was determined that certain documents were under development concurrently in each region. The regional LNP documents that had relevance to the Task Force mission included:

A.   Requirements Documents

Request for Proposals (RFPs) were developed in each region to invite neutral third party vendors to submit proposals to provide NPAC SMSs. The RFP in each region included, either as an attachment or by reference, the Functional Requirements Specification (FRS), which defines the functional requirements for the NPAC SMS and the Interoperable Interface Specification (IIS) which contains the information model for the NPAC SMS mechanized interfaces. Since these two (2) requirements documents were being discussed concurrently in all regions, the Task Force determined that immediate consideration for standardization across the regions was required.

B.   NPAC SMS Provisioning Process Flows

The NPAC SMS Provisioning Process Flows document describes the inter-service provider and NPAC SMS process flows. This series of nine (9) flows was also being addressed independently in each region. The Task Force determined that the flows also required immediate consideration for standardization.

6.7.5.2 The LNPA Technical & Operational Requirements Task Force reviewed the content of the above regional documents and determined that they were substantially similar to each other. The Task Force concluded there were significant advantages to the industry if standard FRS, IIS, and NPAC SMS Provisioning Process Flows were developed and endorsed as industry standards. These advantages are defined in greater detail in Section 5.2 of the Task Force report contained in Appendix E. At a high level the advantages include:

- Facilitates meeting FCC schedule
- Better use of LNP resources in all companies

- Facilitates design of associated processes by other industry groups
- Produces timely and cost effective offers of LNP related products
- Minimizes expenditure of time and resources and increases quality for nationwide Service Providers

6.8   Numbering Information Sharing

- Guidelines and standards by which the NANPA and LNPA(s) share numbering information.

6.8.1   The manner in which the North American Numbering Plan Administrator (NANPA) and the LNPA(s) might share numbering information is considered to be an aspect of number pooling. While number pooling may certainly be a desirable outcome made possible by LNPA, it was considered outside the scope of the Working Group's immediate mission, and was therefore not addressed.

7. FUTURE ROLE

7.1 Future Roles

7.1.1 The LNPA Selection Working Group and associated Task Forces have addressed the specific LNPA selection, technical and architectural issues designated by the FCC. However, the Working Group has identified several important areas relating to LNP implementation and ongoing operation that, in the opinion of Working Group members, require continued regulatory and industry oversight. The current structure and membership of the NANC and the LNPA Working Group and Task Forces are well suited to assist in carrying out these activities or at a minimum, initiate the activity by investigating issues and making recommendations. Following is a list of these activities, and recommendations for a potential role for the Working Group and/or its Task Forces.

A. Number Pooling - Number pooling and any other steps required to achieve number utilization efficiency are a short term priority. Area code splits and the advancement of NANP exhaust are issues of grave concern. To ensure a coordinated number pooling effort, interaction between NANPA and LNPA is required during the design, development, and implementation of number pooling. It is recommended that the LNPA Selection Working Group work jointly with the NANPA Working Group in support of this effort.

B. LNPA Initial Deployment Oversight - To ensure compliance with the FCC order, there is a need to review LNPA deployment on a national basis through, at a minimum, the top 100 MSA deployment period. The successful introduction of 800 portability was fostered by an Oversight Committee, chaired by FCC staff, and a committee modeled along these lines could be equally important and necessary to successful LNPA deployment. Specifically, such a committee could be chaired by the Chief, Common Carrier Bureau (or her designate) and staffed by LNPA Working Group members. In support of this Oversight Committee recommendation, the Working Group notes that the FCC has already delegated responsibility to the Chief, Common Carrier Bureau, to take action to address any problems that arise over specific implementation procedures, and the Working Group is already comprised of industry experts in LNPA implementation.

C. LNPA General Oversight - NANC will provide oversight to ensure that LNPA activities support FCC objectives of neutral operation of the LNPAs and to ensure that national uniformity and interoperability in LNP administration are achieved. The LLCs, by terms of their respective operating agreements, accept the role of NANC in this oversight capacity, and acknowledge that they will comply with FCC directives. Further, the LNPAs are obligated to comply with regulatory directives through requirements in both the RFPs and master contracts. See Section 4.4.4 for additional information. Details of how NANC recommendations will be

applied to the LLCs will be developed by the LNPA Selection Working Group for NANC consideration.

D.   NPAC SMS Change Management Process - There is an immediate need to maintain a centralized focus on the change management process for future NPAC SMS enhancements. The LNPA Technical & Operational Requirements Task Force developed an interim procedure to fill this role over the last four (4) months and currently fills the role of reviewing, selecting, and prioritizing NPAC SMS release two (2) and release three (3) changes. The Task Force recommended adoption of this interim change management process in Section 6.7.3.5 above.

The LNPA Selection Working Group recognizes that, having recommended technical and operational standards for the industry to follow for the implementation of NPAC SMS, ongoing changes to the requirements must be managed. The Working Group recommends that an open industry group, such as the LNPA Technical & Operational Requirements Task Force or other similar group designated by the NANC, be charged to continue to maintain ongoing technical standards for the NPAC. The recommendation includes development of a permanent change management process that will provide an open and neutral facility for the submission and consideration of changes requested to the NANC FRS and/or NANC IIS requirements. The procedure should include the definition of standard change request documents, vehicles for the submission and distribution of requests, and timetables for the process of open consideration and prioritization of such requests.

E.   Location/Service Portability and Wireless LNP - A number of other concerns will require oversight. For example, inclusion of wireless in LNP and implementation of location and service portability are areas that will potentially require changes to the NPAC SMS design, and will therefore require NANC oversight. The LNPA Selection Working Group, with task force support, or similar teams as NANC deems appropriate, are required in the future to oversee these changes.

F.   LNP Dispute Resolution - The NANC Dispute Resolution Working Group developed a dispute resolution process called "Resolution of Numbering Disputes". The LNPA Selection Working Group recommends that a common NANPA and LNPA dispute resolution process be developed jointly by the two (2) Working Groups. The LNPA Selection Working Group further agrees to recommend modifications to each LLC's dispute resolution process to incorporate these new NANC dispute resolution procedures. LLC disputes and other LNP disputes as may be defined by the process could then be submitted through dispute resolution to NANC, as appropriate.

G.   <u>Expanded NANP Environments</u> - To ensure effective development and implementation of expanded NANP (12-13 or more digits) environment, interaction between NANP and LNPA is necessary. It is recommended that the LNPA Selection Working Group work with the NANPA Working Group in support of future expanded NANP environments.

Appendix A

LNPA Selection Working Group
and
LNPA Task Forces Composition

LNPA Selection Working Group

Company/Association	Name
Airtouch Communications	Kim Mahoney
Ameritech	Terry Appenzeller (Co-Chair)
APCC, Inc.	Greg Haledjian
AT&T	Ellwood Kerkeslager (Co-Chair)
Bell Atlantic	Renie Spriggs
Bell Atlantic	John Rudden
Bellcore	John Malyar
BellSouth	Bill Shaughnessy, Jr.
BellSouth Wireless	Ken Buchanan
California PUC	Natalie Billingsley
Cox	Carrington Phillip
Florida Public Service Commission	Stan Greer
Frontier	David Keech
GTE	Bob Angevine
Interstate Fibernet	Steven Brownsworth
Lucent Technologies	Doug Rollender
Maryland PSC	Geoffrey Waldau
MCI	Beth Kistner
MCI	Woody Traylor
Nextel	Rob Chimsky
Nortel	Mike Sutter
NYNEX	Frank Saletel
Ohio PUC	Scott Potter
PACE/COMPTEL	David Malfara
Pacific Bell	Joanne Balen
Perot Systems	Tim McCleary
SBC	Gary Fleming
Selectronics	Daniel Owen
Sprint	Hoke R. Knox
Sprint PCS/PCIA	Larry Grisham
Stentor	Rich Leroux
Telefonica de Puerto Rico	Roberto Correa
Teleport	Ed Gould
Time Warner/NCTA	Dan Engleman
US West	Cathy Handley
USTA	Dennis Byrne
WorldCom	Scot Lewis

LNPA Architecture Task Force

Company/Association	Name
Airtouch	Paula Jordan
Ameritech	Roger Marshall
AT&T	Karen Weis
Bell Atlantic	Renie Spriggs (Co-Chair)
Bell Atlantic	John Rudden
Bellcore	John Malyar
BellSouth	Steve Sauer
BellSouth Wireless	Karl Koster
California PUC	Natalie Billingsley
Cox	Carrington Phillip
GTE	David Wang
Illinois Commerce	Brent Struthers
Interstate Fibernet	Steve Brownsworth
Lucent Technologies	Doug Rollender
MCI	Woody Traylor
Nortel	Pat Carstensen
NYNEX	Thomas McGarry, Kevin Cooke
Ohio PUC	Scott Potter
OPASTCO	Greg Rise
Pacific Bell	Sandra Cheung
Perot Systems	Tim McCleary
Sprint	Hoke R. Knox (Co-Chair)
SBC	Bob Schaefer
Time Warner/NCTA	Dan Engleman
US West Wireless	Debbie Steele

LNPA Technical & Operational Requirements Task Force

Company/Association	Name
Ameritech	Donna Navickas
AT&T	Bonnie Baca (Co-Chair)
Bell Atlantic	Bob Allen
Bellcore	John Malyar
BellSouth	Ron Steen
BellSouth Wireless	Karl Koster
California PUC	Natalie Billingsley
Cox	Karen Furbish
EDS	Michael Haga
GTE	Bob Angevine
IBM	J. Paul Golick
Illuminet/ITN	Robert Wienski
Interstate Fibernet	Steve Brownsworth
Lockheed Martin	Larry Vagnoni
Lucent Technologies	Doug Rollender
MCI	Steve Addicks
NYNEX	Ed Birmingham
OPASTCO	John McHugh
Pacific Bell	Sandra Cheung
Pacific Bell Mobile Service	Linda Melvin
Perot Systems	Tim McCleary
Pocketcom/CTA	Nina Blake
SBC	Marilyn Murdock (Co-Chair)
Sprint	Dave Garner
Telecom Software Enterprises	Lisa Marie Maxson
Teleport	Phil Presworsky
Time Warner/NCTA	Karen Kay
US West	Cynthia Gagnon
WinStar	Steve Merrill
WorldCom	Bettie Shelby

Appendix B

LNPA Selection Working Group
and
LNPA Task Force Meetings

LNPA Selection Working Group Meeting Schedule

Meeting Date	Meeting Location
November 8, 1996	Washington, DC
November 18, 1996	Washington, DC
December 3, 1996	Arlington, VA
December 18, 1996	Conference Call
January 7, 1997	Arlington, VA
February 4, 1997	Arlington, VA
February 25, 1997	Arlington, VA
March 21, 1997	Arlington, VA
April 7, 1997	Arlington, VA
April 18, 1997	Conference Call

LNPA Architecture Task Force Meeting Schedule

Meeting Date	Meeting Location
November 18, 1996	Washington, DC
December 2, 1996	Washington, DC
January 7, 1997	Arlington, VA
February 3, 1997	Arlington, VA
February 24, 1997	Arlington, VA
March 10, 1997	Conference Call
March 27, 1997	Conference Call
March 31, 1997	Conference Call

LNPA Technical & Operational Requirements Task Force Meeting Schedule

Meeting Date	Meeting Location
November 18, 1996	Washington, DC
December 2-3, 1996	Arlington, VA
December 16, 1996	Chicago, IL
December 30, 1996	Conference Call
January 7, 1997	Arlington, VA
January 14, 1997	Conference Call
January 20, 1997	Kansas City, MO
January 27-31, 1997	San Francisco, CA
February 24-25, 1997	Arlington, VA
March 5-7, 1997	Dallas, TX
March 14, 1997	Conference Call
March 18, 1997	Conference Call
March 20, 1997	Arlington, VA
March 24, 1997	Denver, CO
April 2, 1997	Conference Call
April 14, 1997	Chicago, IL
April 18, 1997	Conference Call

Appendix C

LNPA Vendor Selection Schedule

LNPA VENDOR SELECTION SCHEDULE*

EVALUATION PROCESS	Midwest Region	Mid-Atlantic Region	North-east Region	West Coast Region	Western Region	South-east Region	South-west Region
LLC Operating Agreement	10/96	6/28/96	9/5/96	11/14/96	Yes	10/14/96	3/13/97
LLC Formed	10/96	6/17/96	9/96	9/96	Yes	10/1/96	12/2/96
RFP Issued	2/6/96	7/8/96	9/13/96	9/20/96	10/2/96	10/24/96	12/23/96
Vendors Notified of Eligibility Status	2/12/96	8/7/96	10/4/96	10/9/96	10/23/96	N/A	N/A
Vendor Submits Q&A	2/22/96	8/15/96	10/4/96	10/18/96	10/16/96	11/4/96	N/A
Bidder's Conference	Q&A	9/17/96	10/11/96	10/18/96	10/29/96	11/20/96	1/6/97
RFP Responses Due	3/18/96	10/8/96	10/25/96	11/1/96	11/12/96	11/26/96	1/13/97
LLC Notifies Vendor of Selection	5/15/96	11/25/96	12/18/96	02/21/97	12/11/96	2/1/97	2/28/97
Contract Negotiated/Signed	12/96	2Q97	2Q97	4/3/97	2Q97	2Q97	2Q97
"Build Out" Period Completed	3/17/97	4/1/97	4/15/97	TBD	6/1/97	6/1/97	6/1/97
NPAC Ready – Testing	4/18/97	5/1/97	5/15/97	TBD	7/1/97	7/1/97	6/1/97
NPAC Ready – Live Testing	** 7/1/97	8/1/97	TBD	TBD	TBD	TBD	9/16/97
Deployment	10/1/97 - 3/31/98	9/1/97 - 3/31/98	10/1/97 - 3/31/98	10/1/97 - 3/31/98	10/1/97 - 3/31/98	10/1/97 - 3/31/98	10/1/97 - 3/31/98

* Schedule as of 4/9/97
** Illinois Field Trial 7/1/97 - 8/30/97

Appendix D

Architecture & Administrative Plan for Local Number Portability

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│     NORTH AMERICAN NUMBERING COUNCIL             │
│  LNP ARCHITECTURE & ADMINISTRATIVE PLAN          │
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NORTH AMERICAN NUMBERING COUNCIL

ARCHITECTURE & ADMINISTRATIVE PLAN FOR LOCAL NUMBER PORTABILITY

NANC - LNP Architecture Task Force

EDITOR: Hoke R. Knox

NORTH AMERICAN NUMBERING COUNCIL
LNP ARCHITECTURE & ADMINISTRATIVE PLAN

Attachment A.........N-1 Call Scenarios

1. LOCAL NUMBER PORTABILITY OVERVIEW

On June 27, 1996, the FCC ordered the phased implementation of Local Number Portability (LNP). A subsequent First Memorandum Opinion And Order On Reconsideration was adopted on March 6, 1997 and released on March 11, 1997.

LNP is defined in the Telecommunications Act of 1996 as "the ability of users of telecommunications services to retain, at the same location, existing telecommunications numbers without impairment of quality, reliability, or convenience when switching from one telecommunications carrier to another." The primary elements of the order are as follows:

- All LECs are required to begin the implementation of a long term LNP solution in the 100 largest Metropolitan Statistical Areas (MSAs). Implementation of a LNP trial will begin in the Chicago, Illinois MSA, with the implementation in remaining MSAs beginning October 1, 1997. The FCC has mandated that implementation in the top 100 MSAs will be complete by December 31, 1998.
- After December 31, 1998, each LEC must make long term number portability available in smaller MSAs within six months after a bona fide request by another telecommunications carrier.
- All cellular, broadband PCS, and covered SMR (Specialized Mobile Radio) providers are required to have the capability of delivering calls to ported numbers anywhere in the country by December 31, 1998, and to offer number portability including support for roaming, throughout their networks by June 30, 1999.

2. SERVICE PROVIDER BUSINESS DOMAIN IMPACT

LNP touches every aspect of a Service Provider's business domain. Changes in business processes and their support systems are required to implement LNP. Also, major changes in call processing are required in the network. Figure 1 is a high level illustrative view of the business and network systems that are impacted.

This specification was developed primarily from a wireline number portability perspective. Unique wireless number portability requirements have not yet been considered in the development of this document. Modifications to this document may be required to support wireless number portability.

3. IXC BUSINESS DOMAIN IMPACT

The Interexchange Carriers (IXCs) will have many of the same change impacts that the Service Provider business entities have. Impacts to call processing, their business processes and their support systems are required to implement LNP.

4. HIGH LEVEL LNP PROCESS VIEW (*for Illustration*)
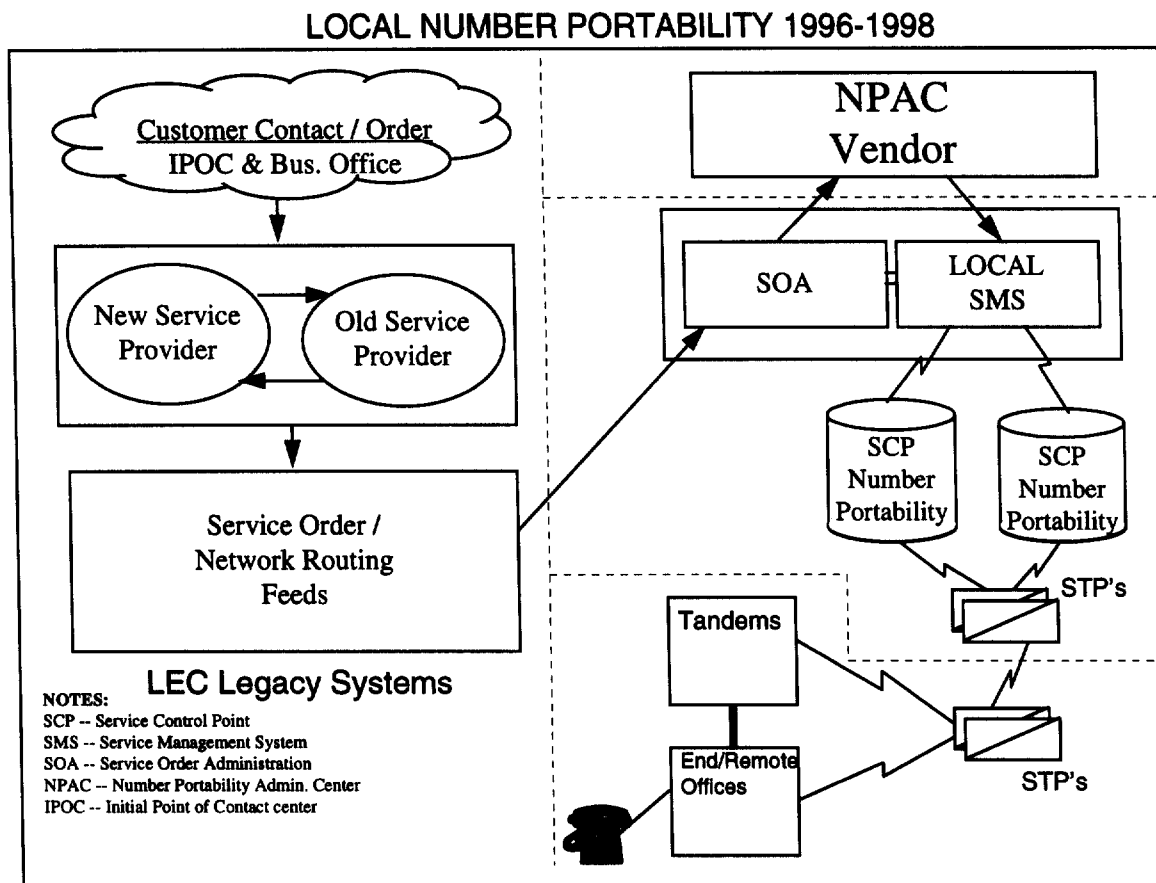
LOCAL NUMBER PORTABILITY 1996-1998

Figure 1

5. LNP HISTORY

The Illinois Commerce Commission (ICC) took the lead in July, 1995 as the first state to address LNP. Four different LNP architectures were being reviewed by the ICC LNP workshop. The workshop selected AT&T's LRN solution for LNP during September 1995.

In the main ICC LNP workshop on November 16, 1995, all switch vendors present indicated that they could provide LNP software capabilities based upon the Illinois specifications by 2Q97. The switch vendors present were AT&T Network Systems (now Lucent), Nortel, Siemens, and Ericsson. The issue of vendors being able to provide LNP was resolved and the planned date for LNP implementation in Chicago was established for 2Q97. This date was changed by the FCC Order which called for LNP testing during 3Q97 leading to full implementation in 4Q97.

6. LNP PERFORMANCE CRITERIA

The FCC adopted in its original order the following minimum performance criteria. Any long-term number portability method, including call processing scenarios or triggering, must:

(1) support existing networking services, features, and capabilities;

(2) efficiently use numbering resources;

(3) not require end users to change their telecommunications numbers;

(4) Deleted[1]

(5) not result in unreasonable degradation in service quality or network reliability when implemented;

(6) not result in any degradation of service quality or network reliability when customers switch carriers;

(7) not result in a carrier having a proprietary interest;

(8) be able to accommodate location and service portability in the future; and

(9) have no significant adverse impact outside the areas where number portability is deployed.

7. LNP ASSUMPTIONS (Wireline Only)

7.1 Service Provider Definition

In the context of LNP, a Service Provider is a facility (switched) based[2] local telecommunications provider certified by the appropriate regulatory body or bodies.

7.2 LRN – Location Routing Number

LRNs are 10 digit numbers that are assigned to the network switching elements (Central Office - Host and Remotes as required) for routing of calls in the network. The first six digits of the LRN will be one of the assigned NPA NXX of the switching element. The purpose and functionality of the last four digits of the LRN have not yet been defined, but are passed across the network to the terminating switch.

7.3 LNP Portability Boundary

If location portability is ordered by a state commission in the context of Phase I implementation of LRN, location portability is technically limited to rate center/rate district boundaries of the incumbent LEC due to rating/routing concerns. Additional boundary limitations, such as the wire center boundaries of the incumbent LEC may be required due to E911 or NPA serving restrictions and/or regulatory decisions.

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[1] Item (4) was deleted in the First memorandum Opinion And Order On Reconsideration adopted March 6, 1997 and released on March 11, 1997.

[2] The term facility based is used in this document to describe carriers who own or lease switching equipment.

7.4 NPAC LNP Databases Content

The NPAC LNP database contains only ported numbers and the associated routing and service provider information.

7.5 Line Information Data Base (LIDB) And Custom Local Access Signaling Services (CLASS)

The new service provider has the responsibility to populate the appropriate LIDB *and CLASS* information associated with the ported telephone number.

7.6 Line Based Calling Cards

When a telephone number is ported the nonproprietary line based calling card number will be deactivated by the old service provider and may be activated by the new service provider if the new service provider offers a line based calling card service. There are currently billing fraud and other technical concerns with nonproprietary line based credit cards which limit their provision to the new service provider. If the new service provider does not offer a nonproprietary line based calling card, the customer is not precluded from obtaining a proprietary line based calling card from another service provider.

7.7 Porting of Reserved & Unassigned Numbers[3]

7.7.1 Reserved Numbers

Telephone numbers that are reserved for a customer under a legally enforceable written agreement should be ported when the customer changes service providers.

> 1) Reserved numbers that have been ported must be treated as disconnected telephone numbers when the customer is disconnected or when the service is moved to another service provider and the reserved numbers are not ported to subsequent service providers;
> 2) Reserved numbers that are ported may not be used by another customer;
> 3) Implementation of the capability to port reserved numbers may require modifications to operation support systems and may not be available initially.

7.7.2 Unassigned number/Unreserved

Service Providers will not port unassigned numbers unless and until there is an explicit authorization for such porting from a regulator with appropriate jurisdiction.

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[3] It will be the responsibility of the service provider receiving the ported reserved telephone numbers to provision their switches so that appropriate treatment by the recipient switch is provided which suppresses cause code 26 release messages for the ported reserved telephone numbers only.

7.8 N-1 Call Routing

Each designated N-1 carrier is responsible for ensuring queries are performed on an N-1 basis where "N" is the entity terminating the call to the end user, or a network provider contracted by the entity to provide tandem access. Examples of N-1 routing are found in **Attachment A**.

7.9 Disconnected Telephone Numbers (Snap-back)

When a ported number is disconnected, that telephone line number will be released (Snap-back), after appropriate aging, back to the original Service Provider assigned the NXX in the LERG.

7.10 Default Routing Overload and Failures

Unless specified in business arrangements, carriers may block default routed calls incoming to their network in order to protect against overload, congestion, or failure propagation that are caused by the defaulted calls.

7.11 Number Pooling

The FCC Order on LNP provided no explicit guidance on number pooling. Various industry activities are underway addressing this issue and Number Pooling is outside the scope of this Task Force.

7.12 NPAC to LSMS Architectural Restrictions

All networks will rely on the NPAC database as the ultimate source of porting data. Synchronization of networks to a single set of routing data is paramount to network operations. Therefore appropriate restrictions must be placed upon how these network elements may interconnect from an architectural perspective.

Specifically, the NPAC shall download relevant porting data required by participating carriers or their agents for the specific subset of network nodes. Consequently, the NPAC system shall be the source of all porting data for all carriers or agents of those carriers, thereby being the sole originator of all downloads.

As a result of these restrictions, the LSMS must operate as the intermediate database management system which receives downloads from the NPAC, and then further downloads directly to the appropriate SCP functionality in its associated network(s).

Through this architecture, it is intended that if a systems provider is performing a service management functionality, then this systems provider is responsible for contributing its appropriate share of the economic support (as determined via regulatory actions on cost allocation) to the NPAC. The local SMS architecture must not allow service providers to avoid their allocation of the shared NPAC costs. Such architecture does not preclude the implementation of the LSMS functionality in a distributed manner in an individual service provider's network.

7.13 *High Volume Call In Numbers (Choke Network)(Further study req.)*

An area of concern regarding LNP is High Volume Call In (HVCI) networks. When a carrier determines that a customer regularly generates large volumes of terminating traffic, the customer may be moved over to an HVCI network. Examples of these types of customers could be radio stations that regularly hold contests that require many participants to call in a short period of time. An HVCI network allows all such customers to be assigned numbers in an NPA-NXX (e.g., 213-520) dedicated for HVCI. This HVCI number is the number that is announced for any high call in event. Switches in the area can be designed to segregate traffic for HVCI numbers and route it via trunk groups that are dedicated to the network and do not overflow to other trunk groups. The dedicated trunks are engineered to handle limited traffic and, in this way traffic is throttled and cannot congest the network. Such networks has proven to be effective in limiting the effects of large call in events.

However, with LNP before route selection takes place a database query is performed on calls to portable NPA-NXXs. If HVCI numbers are portable, they can generate large volumes of queries that can congest the signaling links and SCPs. Also if the HVCI number is ported and an LRN is returned in the database response, the call will not be routed via HVCI-dedicated trunks. This congestion can in turn effect other POTS type services which compromises the design of HVCI networks. One way to avoid this is to not perform queries on NPA-NXXs dedicated for HVCI networks. Further study is required in order to determine the proper network arrangements.